

# EVERFOCUS

## 1/3" 560 TVL Color Mini Dome Camera Operation Instructions

Model No. **ED350**

Please read this manual first for correct installation and operation. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

### PRECAUTIONS

**1. Do not install the camera near electric or magnetic fields.**

Install the camera away from TV, radio transmitter, magnet, electric motor, transformer, audio speakers since the magnetic fields generate from above devices will distort the video images.

**2. Never disassemble the camera nor put impurities in it.**

Disassembly or impurities may result in trouble or fire.

**3. Never face the camera toward the sun.**

Direct sunlight or severe ray may cause fatal damage to sensor and internal circuit.

**4. Keep the power cord away from water and liquid.**

Touching the wet power cord may result in electric shock.

**5. Never install the camera in areas exposed to water, oil or gas.**

Water, oil or gas may result in failure, electric shock or fire.

**6. Cleaning**

Do not touch the surface of sensor by hand directly. Use a soft cloth to remove the dirt from the camera body. Use lens tissue or a cotton swab and ethanol to clean the sensor and the camera lens.

**7. Do not operate the camera beyond the specified temperature, humidity or power source ratings.**

Use the camera at temperatures within 0°C ~ 40°C (32°F to 104°F) and humidity between 20%~ 80%. The input power source is 12VDC/24VAC.

## **PREFACE**

The ED Series are compact, full functioned CCD Color Indoor Dome Cameras. The stylish appearance can be applied as per installer's ideal locations on the ceiling. The dome camera designed with advanced digital processing circuitry for high resolution 1/3" color interline transfer CCD sensor, it has DIP switch for AGC on/off, BLC on/off. ED vari-focal models use vari focal auto iris lens for discreet surveillance or close-up viewing and it features with iris LEVEL volume control for the best viewing quality. ED300 is 520TVL dome camera equipped with simple Day and Night feature. ED350 is 560TVL high resolution. ED230/330 is day and night IR Dome camera.

## **FEATURES**

- 1/3" Sony super HAD CCD image sensor with approximately 410,000 pixels.
- 560 TVL of horizontal resolution.
- Revolutionary integrated 10-bit Digital Signal Processor (DSP) delivers sharp color images and excellent picture quality.
- Low light sensitivity 0.5 lux/F=1.2.
- Wide-range automatic electronic shutter: up to 1/100,000.
- Manual zoom lens with adjustable viewing range.
- Pure Vision Technology.

## **PACKAGE CONTENTS**

- Camera Unit x 1
- Manual x 1
- Extension Power Cable x 1



## OPTIONAL ACCESSORIES

- **BA-ED-** Mounting L-Bracket for ED Series Mini Dome Cameras



- **EN220** 5.6-inch LCD Test Monitor

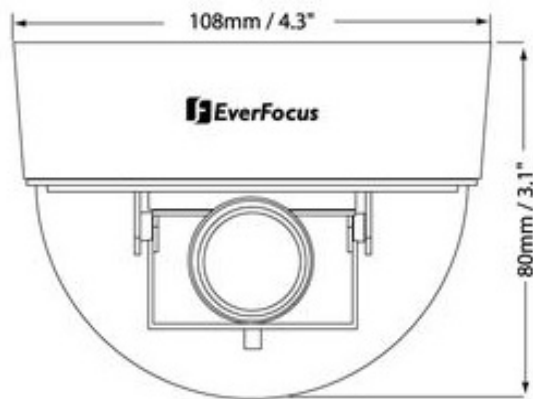


## SPECIFICATIONS

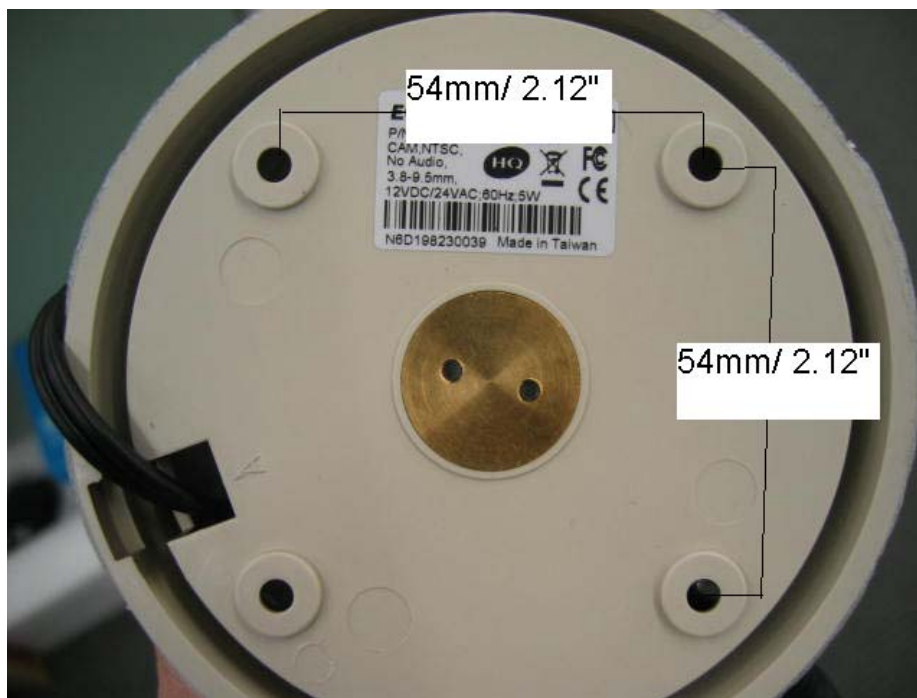
Pickup Device	1/3" SONY Super HAD CCD
Video Format	NTSC or PAL
Scanning System	NTSC: 525 TV lines, 60 fields/sec PAL: 625 TV lines, 50 fields/sec
Picture Elements	768 x 494(NTSC) ; 752 x 582(PAL)
Horizontal Resolution	560TVL
Sensitivity	0.5Lux/F=1.2
S/N Ratio	Over 48dB(AGC off)
Electronic Shutter	1/50(1/60)~1/100,000
Lens Type	Vari-focal lens, Auto Iris f= 2.9~10mm f=3.8~9.5mm f=9~22mm
Back Light Comp.	ON/OFF Switch
Auto Gain Control	ON/OFF Switch
Flickerless	ON/OFF Switch
Auto White Balance	Yes
Gamma Correction	0.45
Video Output	2 video outputs BNC 1.0Vp-p, 75ohm Additional testing video output 1.0Vp-p, 75ohm
Sync. Mode	Internal Sync
Power Source	12VDC/24VAC
Dimensions	108(O.D) x 80(D) mm ; 4.3"(O.D) x 3.1"(D)
Weight	0.3 kg ; 0.7lbs
Operating Temperature	0°C~40°C ; 32°F~104°F (20%~80% Humidity)

## DIMENSIONS

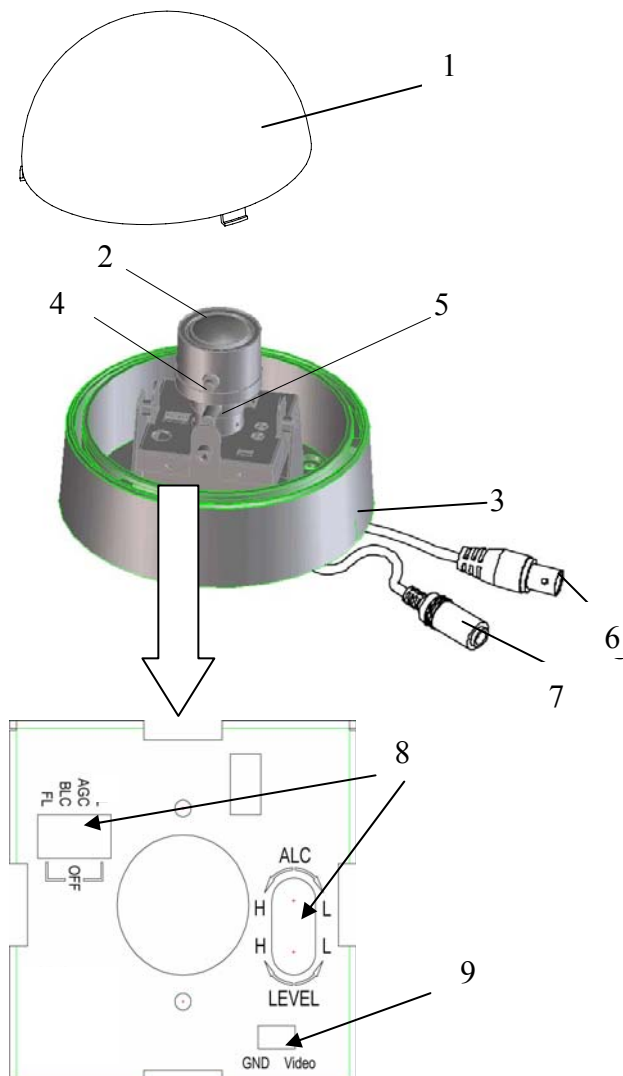
a.



b.



## MAJOR PARTS FUNCTIONS



### (1) Camera Cover

This cover will protect the camera from dust and damage.

### (2) Lens

ED350 and ED300 come with vari-focal lens. ED200, ED230/330 comes with fixed lens. This Vari-Focal Lens allows users to adjust the Zoom and Focus manually.

### (3) Base

The camera unit is set in the dome base when it is shipped from the factory.

### (4) Focus Ring

To set the focus, loosen the Focus ring knob first, then turn the ring toward  $\infty$  or <N> as necessary. When the focus is obtained as desired, tighten the focus ring knob.

#### **(5) Zoom Ring**

Loosen the zoom ring knob, then you can adjust the viewing range. Turn the ring towards <W> for WIDE or <T> for TELE as necessary. When the setting is finished, tighten the zoom ring knob.

#### **(6) Power input**

Use the connector to connect with 12VDC/24VAC power adaptor.

#### **(7) Video Output BNC Connector**

Use the connector to connect with the video in connector of a monitor.

#### **(8) DIP Switch and ALC/Iris adjuster**

Use this for detail camera setting including AGC, Backlight Compensation, Flickerless, Iris. Please see the detail in Camera Setting Section.

#### **(9) Ground Pin**

For monitor use. When setting up the camera, connect a monitor to this video output pin and to the GROUND pin using alligator clip cables, then use the image displayed on the monitor, set the surveillance angle.

## INSTALLATION

This section cover simple steps and detail installation. Please follow instruction for preventing any unnecessary damage.

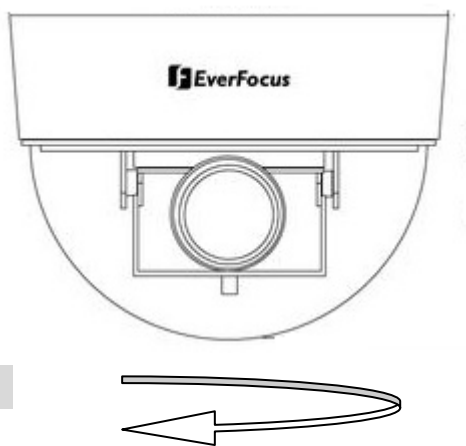
Simple Steps:

1. **Open Camera Cover**
2. **Mount Camera on Ceiling**
3. **Connect power, video**
4. **Optional Connect to EN220 Test Monitor for field testing (monitor is not included)**
5. **Adjust Lens**
6. **Adjust camera setting on Dip Switch**

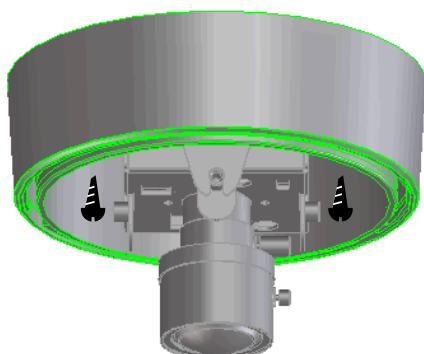
### Detail installation:

1. **Open Camera Cover**

Turn Clockwise to open it gently. Be careful not to damage the lens.



2. **Mount the camera on ceiling. Refer dimension b for drilling dimension.**



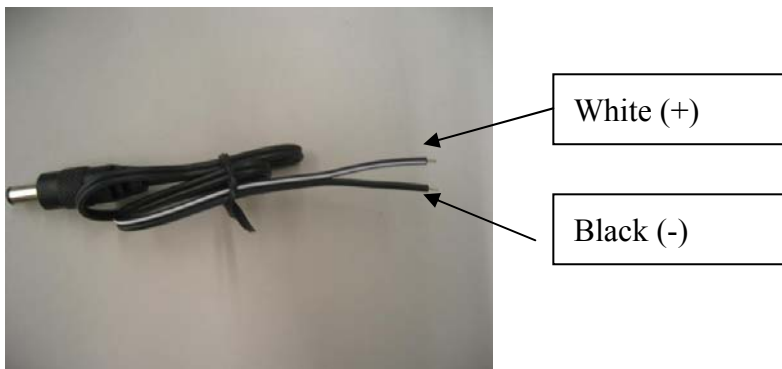




### 3. Connect Power and Video

- a. Connect the BNC connector of the camera to a color monitor, or other video device through a 75 ohm type coaxial cable with BNC female connector at cable extension.
- b. ED Series support dual power source. Connect either 12VDC or 24VAC regulated power source to the camera. Please use power extension for connecting to it if the power adapter cable is not long enough.

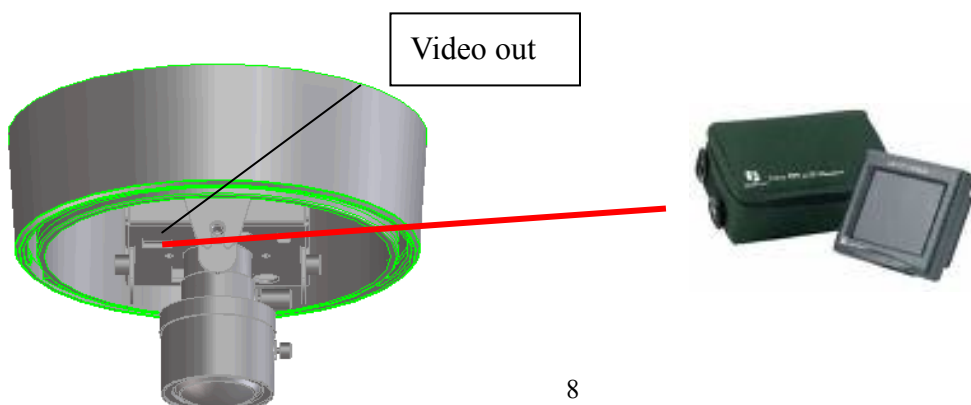
Note!! When connect to 12VDC. Please make sure you connect power +,- correctly. Wrong Connection damage the camera.



- c. Connect the audio ( only for model with Audio)

### 4. Optional Connect to EN220 Test Monitor for field testing (monitor is not included)

It is highly recommend to use Everfocus Test Monitor to test the camera. Find the Video testing connector as following. Connect it to testing monitor for field testing.



## **5. Zoom and focus adjustments**

After the camera was installed, the zoom and focus of the lens must be adjusted.

1. Loosen the zoom ring knob, and then turn the ring towards <W> or <T> as necessary to obtain the desired view range.

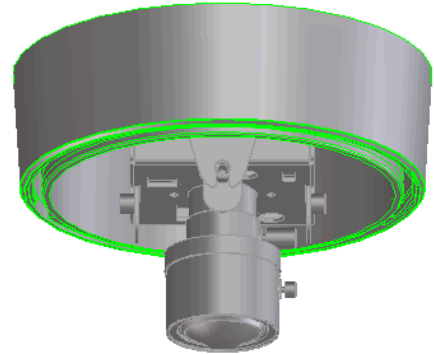
W side (Zoom out)

The viewing range will be wider and the subject is smaller.

T side (Zoom in)

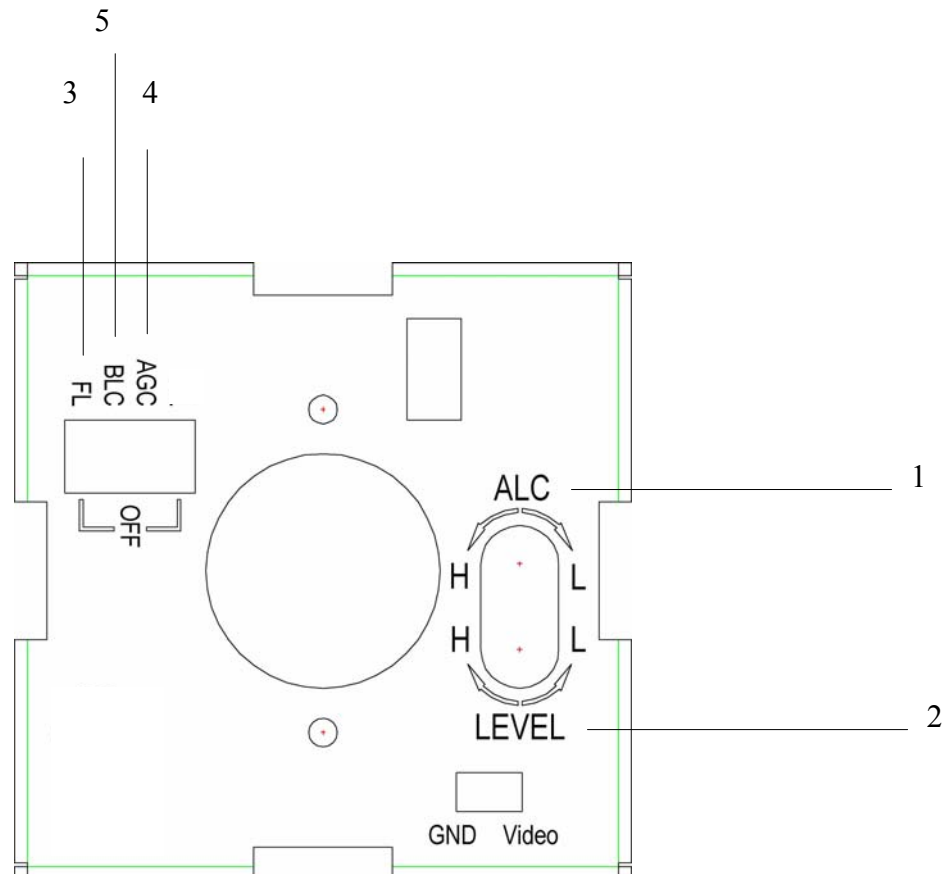
The viewing range will be smaller and the subject is larger.

2. Loosen the focus ring knob, then turn the ring towards  $<\infty>$  or  $<N>$  as necessary to obtain the clear video image.
3. Repeat steps 1 and 2 until the best image is obtained. Once the lens setting finished, tighten the zoom ring and the focus ring knobs.



## 6. Camera Setting

**NOTE:** Be very careful not to scratch or damage the lens while making any kind of setting



### (1) IRIS ALC Adjustment

To select light metering method:

- Turn the IRIS ALC Adjustment VR counterclockwise for Average Metering.
- Turn the IRIS ALC Adjustment VR clockwise for Peak Metering.

### (2) IRIS Level Adjustment

Brightness Level can be adjusted from the IRIS level VR while using the direct drive lens.

- Turn counterclockwise to L to get darker picture.
- Turn clockwise to H to get brighter picture.

### **(3) Flickerless**

When picture flicker fiercely, turn FL on, then the camera will stabilize the speed of electronic shutter at 1/100(NTSC) or 1/120(PAL) automatically, and reduce the flicker immediately.

**The default setting is OFF.**

### **(4) Auto Gain Control Adjustment**

**AGC ON:** The sensitivity increases automatically when the light is low.

**AGC OFF:** A low-noise picture is obtained under a low light condition.

**The default setting is ON.**

### **(5) Back Light Compensation Adjustment**

When the background of the subject is very bright and the subject itself is dark, set the BLC (Back Light Compensation) ON. The BLC will measure the light of the image center and the lens iris will automatically set for optimum image quality.

**The default setting is OFF.**

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